

REMARKS

Claims 1-43 are pending in the current application. In an office action dated January 17, 2008 ("Office Action"), the Examiner rejected claims 40-43 under 35 U.S.C. §101 as being directed to non-statutory subject matter, rejected claims 1-7, 17, 27-29, 31, 32, and 40-43 under 35 U.S.C. §102(e) as being anticipated by Toda, U.S. Patent Application Publication No. 2002/0029301 ("Toda"), and rejected claims 8-16, 18-26, 30, and 33-39 under 35 U.S.C. §103(a) as being unpatentable over Toda. Applicant's representative respectfully traverses these rejections.

Regarding the 35 U.S.C. §101 rejections of claims 40-43, the Examiner states:

Claims 40-43 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The cited claims are directed to an operating system comprising of means for partition system resources, transferring control of resources and providing communication between the partitions all of which can be software and is thus software per se. The cited claims do not meet the statutory category of inventions since the claims are not a method, machine (combination of software and hardware or just hardware), article of manufacture or composition of matter.

This rejection is improper. The Examiner appears to have attempted to rewrite 35 U.S.C. §101 to define the term "machine" to read "combination of software and hardware or just hardware." As can be easily verified by checking many possible sources of current United States Code, 35 U.S.C. §101 does not contain the phrase "combination of software and hardware or just hardware."

Furthermore, the Examiner appears to imply that software is *per se* unpatentable. 35 U.S.C. §101 does not in any way state that software is *per se* unpatentable. In fact, the Federal Circuit, in the well-known decisions *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 147 F.3d 1368 (Fed.Cir. 1998) and in *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352 (Fed.Cir. 1999), has found software to be quite patentable. As stated by the Federal Circuit, in AT&T:

Our analysis of whether a claim is directed to statutory subject matter begins with the language of 35 U.S.C. § 101, which reads:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.

The Supreme Court has construed § 101 broadly, noting that Congress intended statutory subject matter to "include anything under the sun that is made by man." Despite this seemingly limitless expanse, the Court has specifically identified three categories of unpatentable subject matter: "laws of nature, natural phenomena, and abstract ideas."

AT&T, 172 F.3d 1352 at 1355 (citations omitted).

This court recently pointed out that any step-by-step process, be it electronic, chemical, or mechanical, involves an "algorithm" in the broad sense of the term. **Because § 101 includes processes as a category of patentable subject matter, the judicially-defined proscription against patenting of a "mathematical algorithm," to the extent such a proscription still exists, is narrowly limited to mathematical algorithms in the abstract.**

Id. at 1356 (citations omitted) (emphasis added).

Thus, even though a mathematical algorithm is not patentable in isolation, **a process that applies an equation to a new and useful end "is at the very least not barred at the threshold by § 101."** In this regard, it is particularly worthy of note that the argument for the opposite result, that "the term 'algorithm' . . . is synonymous with the term 'computer program,'" *id.* at 219 (Stevens, J., dissenting), and thus computer-based programs as a general proposition should not be patentable, was made forcefully in dissent by Justice Stevens; his view, however, was rejected by the *Diehr* majority.

Id. at 1357 (citations omitted) (emphasis added).

In contrast, our inquiry here focuses on whether the mathematical algorithm is applied in a practical manner to produce a useful result.
Id. at 1360 (emphasis added).

Thus, there are only three categories of *per se* unpatentable subject matter: laws of nature, natural phenomena, and abstract ideas. An operating system is not a law of nature, a natural phenomena, or an abstract idea. A 35 U.S.C. §101 rejection requires a certain amount of analysis, which appears to be completely lacking in the Examiner's rejections. Moreover, the Examiner appears to state that, if an entity can be implemented in software, regardless of whether or not it is implemented in software, then the entity can

be regarded as *per se* software and is therefore unpatentable. This is completely unsupported by citation to the M.P.E.P., case law, or statute, and is, not coincidentally, entirely incorrect.

The 35 U.S.C. §102 and 35 U.S.C. §103 rejections are all completely based on Toda. Claim 1 is rejected as follows:

As to claim 1, TODA teaches a method comprising: determining which system resources of a computer system, if any, are to remain under control of a resident operating system of the computer system and which of the system resources are to be placed under control of one or more customized execution environments, CE2s, that are to be established within the computer system (via the information of partitioned hardware resources management table that is obtained to partition the resources among the various partitions such that the operating system of the partitions remove hardware resources associated with another partition from its management table) (pg. 2, paragraph 0042-0044; pg. 3, paragraph 0045-0047); and partitioning the system resources among the resident operating system and the one or more CE2s by associating one or more partitions of the system resources with the one or more CE2s (via the information of partitioned hardware resources management table that is obtained to partition the resources among the various partitions such that the operating system of the partitions remove hardware resources associated with another partition from its management table) (pg. 2, paragraph 0042-0044; pg. 3, paragraph 0045-0047).

The Examiner twice cites to six paragraphs of Toda, without further explanation and without providing any definite correspondence between anything discussed or mentioned by Toda and the language of claim 1. The Examiner, for example, asserts that Toda teaches a method of partitioning system resources between a resident operating system and one or more customized execution environments. Applicant's representative has carefully read and re-read the six paragraphs of Toda cited by the Examiner and can find not a single mention of customized execution environments. In fact, Applicant's representative has read the entire disclosure of Toda, several times, and cannot find any mention of customized execution environments.

Applicant's representative has found numerous references to a first operating system and a second operating system, including in Figure 2 of Toda and in cited paragraphs [0045-0047]. However, a customized execution environment is not an

operating system, as clearly stated in paragraph [00038] of the current application, on page 12: "CE2s are quite distinct from an operating system or specialized operating system." Applicant's representative suggests that the Examiner read this section of the current application to understand the many differences between customized execution environments and operating systems. Applicant's representative has also amended claims to more distinctly point out that the current application is directed to partitioning resources between a resident operating system and a *customized execution environment*. The remaining 35 U.S.C. §102 and 35 U.S.C. §103 rejections are similar, all asserting that Toda teaches methods and systems involving customized execution environments when, in fact, Toda neither mentions nor suggests anything at all related to customized execution environments. All of the independent claims of the current application explicitly claim custom execution environments, and therefore no claim of the current application can possibly be taught or made obvious by Toda.

This rejection falls far short of the requirements of a *prima facie* anticipation rejection, as discussed in M.P.E.P. §2131, requiring, for example, that each and every element of an anticipated claim be found in the anticipating reference. Because Toda does not teach, disclose, or mention anything at all related to custom execution environments, because the Examiner has failed to point to anything in Toda that constitutes a custom execution environment, and because every independent claim of the current application explicitly mentions a custom execution environment, none of the current claims can possibly be anticipated by Toda.

While the recent U.S. Supreme Court decision, *KSR International Co. v. Teleflex Inc.* rejected the overly rigid and formalistic application of the Federal Circuit's teaching-suggestion-motivation ("TSM") test, as discussed in M.P.E.P. §2141(I), the *KSR* decision provided useful direction with regard to obviousness-type rejections. First of all, as discussed in M.P.E.P. §2141(II), *KSR* again emphasized that obviousness is a question of law based on underlying factual inquiries, including ascertaining the differences between the claimed invention and the prior art and resolving the level of ordinary skill in the pertinent art, and reemphasized the *Graham* factors. M.P.E.P. §2141(II) emphasizes the fact that examiners, in making obviousness-type rejections, "fulfill the critical role of

fact finder when resolving the *Graham* inquiries. It must be remembered that while the ultimate determination of obviousness is a legal conclusion, the underlying *Graham* inquiries are factual." Furthermore, in Applicant's representative's respectfully offered opinion, *KSR* clearly apportions significant responsibility and burdens on examiners, as discussed in M.P.E.P. §2141(III):

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The court quoting *In Re Kahn*, 441 F.3d 977, 988, 78 U.S.P.Q.2d 1329, 1336 (Fed.Cir. 2006), stated that "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."

M.P.E.P. §2141(II), in emphasizing the fact that examiners, in making obviousness-type rejections, fulfill the critical role of fact finder, further states that: "Factual findings made by Office personnel are the necessary underpinnings to establish obviousness."

In Applicant's representative's respectfully offered opinion, the Examiner has failed in basic fact finding, and has therefore failed to offer a rational underpinning and rational argument to support the Examiner's obviousness-type rejection. Toda neither mentions nor suggests anything at all about custom execution environments. By stating that Toda does teach custom execution environments, without pointing to any passage or term in Toda that would support such an assertion, the Examiner has both failed to find the facts necessary for a rational underpinning of the obviousness-type rejection and has cited Toda for something that Toda does not stand for, both factual errors.

In Applicant's representative's opinion, all of the claims remaining in the current application are clearly allowable. Favorable consideration and a Notice of Allowance are earnestly solicited.

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